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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/756,690A

DATE: 05/02/2002 P.6
TIME: 16:44:01

Input Set : **A:\249-124.app**
Output Set: **N:\CRF3\05022002\I756690A.raw**

```
 4 <110> APPLICANT: KOLTERMAN, ORVILLE G.
 5         YOUNG, ANDREW A.
 7 <120> TITLE OF INVENTION: USE OF EXENDINS AND AGONISTS THEREOF FOR MODULATION OF
 8         TRIGLYCERIDE LEVELS AND TREATMENT OF DYSLIPIDEMIA
10 <130> FILE REFERENCE: 249/124
12 <140> CURRENT APPLICATION NUMBER: 09/756,690A
13 <141> CURRENT FILING DATE: 2002-04-19
15 <150> PRIOR APPLICATION NUMBER: 60/175,365
16 <151> PRIOR FILING DATE: 2000-01-10
18 <160> NUMBER OF SEQ ID NOS: 188
20 <170> SOFTWARE: PatentIn Ver 2.1
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 39
24 <212> TYPE: PRT
25 <213> ORGANISM: Heloderma horridum
27 <220> FEATURE:
28 <223> OTHER INFORMATION: Exendin-3
30 <220> FEATURE:
31 <223> OTHER INFORMATION: c-term amidation
33 <400> SEQUENCE: 1
34 His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
35  1               5                  10                  15
37 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
38               20                  25                  30
40 Ser Gly Ala Pro Pro Pro Ser
41           35
44 <210> SEQ ID NO: 2
45 <211> LENGTH: 39
46 <212> TYPE: PRT
47 <213> ORGANISM: Heloderma suspectum
49 <220> FEATURE:
50 <223> OTHER INFORMATION: Exendin-4
52 <220> FEATURE:
53 <223> OTHER INFORMATION: c-term amidation
55 <400> SEQUENCE: 2
56 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
57  1               5                  10                  15
59 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
60               20                  25                  30
62 Ser Gly Ala Pro Pro Pro Ser
63           35
66 <210> SEQ ID NO: 3
67 <211> LENGTH: 39
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C--> 13 (marginal annotation pointing to line 13)

RAW SEQUENCE LISTING   DATE: 05/02/2002
PATENT APPLICATION: US/09/756,690A   TIME: 16:44:01

Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

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68 <212> TYPE: PRT
69 <213> ORGANISM: Artificial Sequence
71 <220> FEATURE:
72 <223> OTHER INFORMATION: Description of Artificial Sequence: Exendin Agonist
74 <220> FEATURE:
75 <221> NAME/KEY: MOD_RES
76 <222> LOCATION: (1)
77 <223> OTHER INFORMATION: His, Arg or Tyr
79 <220> FEATURE:
80 <221> NAME/KEY: MOD_RES
81 <222> LOCATION: (2)
82 <223> OTHER INFORMATION: Ser, Gly, Ala or Thr
84 <220> FEATURE:
85 <221> NAME/KEY: MOD_RES
86 <222> LOCATION: (3)
87 <223> OTHER INFORMATION: Asp or Glu
89 <220> FEATURE:
90 <221> NAME/KEY: MOD_RES
91 <222> LOCATION: (6)
92 <223> OTHER INFORMATION: Phe, Tyr or naphthylalanine
94 <220> FEATURE:
95 <221> NAME/KEY: MOD_RES
96 <222> LOCATION: (7)
97 <223> OTHER INFORMATION: Thr or Ser
99 <220> FEATURE:
100 <221> NAME/KEY: MOD_RES
101 <222> LOCATION: (8)
102 <223> OTHER INFORMATION: Ser or Thr
104 <220> FEATURE:
105 <221> NAME/KEY: MOD_RES
106 <222> LOCATION: (9)
107 <223> OTHER INFORMATION: Asp or Glu
109 <220> FEATURE:
110 <221> NAME/KEY: MOD_RES
111 <222> LOCATION: (10)
112 <223> OTHER INFORMATION: Leu, Ile, Val, pentylglycine or Met
114 <220> FEATURE:
115 <221> NAME/KEY: MOD_RES
116 <222> LOCATION: (14)
117 <223> OTHER INFORMATION: Leu, Ile, pentylglycine, Val or Met
119 <220> FEATURE:
120 <221> NAME/KEY: MOD_RES
121 <222> LOCATION: (22)
122 <223> OTHER INFORMATION: Phe, Tyr or naphthylalanine
124 <220> FEATURE:
125 <221> NAME/KEY: MOD_RES
126 <222> LOCATION: (23)
127 <223> OTHER INFORMATION: Ile, Val, Leu, pentylglycine, tert-butylglycine or Met
129 <220> FEATURE:
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RAW SEQUENCE LISTING   DATE: 05/02/2002
PATENT APPLICATION: US/09/756,690A   TIME: 16:44:01

Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

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130 <221> NAME/KEY: MOD_RES
131 <222> LOCATION: (24)
132 <223> OTHER INFORMATION: Glu or Asp
134 <220> FEATURE:
135 <221> NAME/KEY: MOD_RES
136 <222> LOCATION: (25)
137 <223> OTHER INFORMATION: Trp, Phe, Tyr, or naphthylalanine
139 <220> FEATURE:
140 <221> NAME/KEY: MOD_RES
141 <222> LOCATION: (31)
142 <223> OTHER INFORMATION: Pro, homoproline, 3Hyp, 4Hyp, thioproline,
143       N-alkylglycine, N-alkylpentylglycine, or N-alkylalanine
145 <220> FEATURE:
146 <221> NAME/KEY: MOD_RES
147 <222> LOCATION: (36)
148 <223> OTHER INFORMATION: Pro, homoproline, 3Hyp, 4Hyp, thioproline,
149       N-alkylglycine, N-alkylpentylglycine, or N-alkylalanine
151 <220> FEATURE:
152 <221> NAME/KEY: MOD_RES
153 <222> LOCATION: (37)
154 <223> OTHER INFORMATION: Pro, homoproline, 3Hyp, 4Hyp, thioproline,
155       N-alkylglycine, N-alkylpentylglycine, or N-alkylalanine
157 <220> FEATURE:
158 <221> NAME/KEY: MOD_RES
159 <222> LOCATION: (38)
160 <223> OTHER INFORMATION: Pro, homoproline, 3Hyp, 4Hyp, thioproline,
161       N-alkylglycine, N-alkylpentylglycine, or N-alkylalanine
163 <220> FEATURE:
164 <221> NAME/KEY: MOD_RES
165 <222> LOCATION: (39)
166 <223> OTHER INFORMATION: Ser, Thr or Tyr, which is optionally amidated with the
167       provision that the compound is not exendin-3 or exendin-4
169 <400> SEQUENCE: 3
W--> 170 Xaa Xaa Xaa Gly Thr Xaa Xaa Xaa Xaa Xaa Ser Lys Gln Xaa Glu Glu
171  1               5                   10                  15
W--> 173 Glu Ala Val Arg Leu Xaa Xaa Xaa Xaa Leu Lys Asn Gly Gly Xaa Ser
174              20                  25                  30
W--> 176 Ser Gly Ala Xaa Xaa Xaa Xaa
177          35
180 <210> SEQ ID NO: 4
181 <211> LENGTH: 38
182 <212> TYPE: PRT
183 <213> ORGANISM: Artificial Sequence
185 <220> FEATURE:
186 <223> OTHER INFORMATION: Description of Artificial Sequence: Exendin Agonist
188 <220> FEATURE:
189 <221> NAME/KEY: MOD_RES
190 <222> LOCATION: (1)
191 <223> OTHER INFORMATION: His, Arg or Tyr
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RAW SEQUENCE LISTING   DATE: 05/02/2002
PATENT APPLICATION: US/09/756,690A   TIME: 16:44:01

Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

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193 <220> FEATURE:
194 <221> NAME/KEY: MOD_RES
195 <222> LOCATION: (2)
196 <223> OTHER INFORMATION: Ser, Gly, Ala or Thr
198 <220> FEATURE:
199 <221> NAME/KEY: MOD_RES
200 <222> LOCATION: (3)
201 <223> OTHER INFORMATION: Asp or Glu
203 <220> FEATURE:
204 <221> NAME/KEY: MOD_RES
205 <222> LOCATION: (5)
206 <223> OTHER INFORMATION: Ala or Thr
208 <220> FEATURE:
209 <221> NAME/KEY: MOD_RES
210 <222> LOCATION: (6)
211 <223> OTHER INFORMATION: Ala, Phe, Tyr or naphthylalanine
213 <220> FEATURE:
214 <221> NAME/KEY: MOD_RES
215 <222> LOCATION: (7)
216 <223> OTHER INFORMATION: Thr or Ser
218 <220> FEATURE:
219 <221> NAME/KEY: MOD_RES
220 <222> LOCATION: (8)
221 <223> OTHER INFORMATION: Ala, Ser or Thr
223 <220> FEATURE:
224 <221> NAME/KEY: MOD_RES
225 <222> LOCATION: (9)
226 <223> OTHER INFORMATION: Asp or Glu
228 <220> FEATURE:
229 <221> NAME/KEY: MOD_RES
230 <222> LOCATION: (10)
231 <223> OTHER INFORMATION: Ala, Leu, Ile, Val, pentylglycine or Met
233 <220> FEATURE:
234 <221> NAME/KEY: MOD_RES
235 <222> LOCATION: (11)
236 <223> OTHER INFORMATION: Ala or Ser
238 <220> FEATURE:
239 <221> NAME/KEY: MOD_RES
240 <222> LOCATION: (12)
241 <223> OTHER INFORMATION: Ala or Lys
243 <220> FEATURE:
244 <221> NAME/KEY: MOD_RES
245 <222> LOCATION: (13)
246 <223> OTHER INFORMATION: Ala or Gln
248 <220> FEATURE:
249 <221> NAME/KEY: MOD_RES
250 <222> LOCATION: (14)
251 <223> OTHER INFORMATION: Ala, Leu, Ile, pentylglycine, Val or Met
253 <220> FEATURE:
```

Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

```
254 <221> NAME/KEY: MOD_RES
255 <222> LOCATION: (15)
256 <223> OTHER INFORMATION: Ala or Glu
258 <220> FEATURE:
259 <221> NAME/KEY: MOD_RES
260 <222> LOCATION: (16)
261 <223> OTHER INFORMATION: Ala or Glu
263 <220> FEATURE:
264 <221> NAME/KEY: MOD_RES
265 <222> LOCATION: (17)
266 <223> OTHER INFORMATION: Ala or Glu
268 <220> FEATURE:
269 <221> NAME/KEY: MOD_RES
270 <222> LOCATION: (19)
271 <223> OTHER INFORMATION: Ala or Val
273 <220> FEATURE:
274 <221> NAME/KEY: MOD_RES
275 <222> LOCATION: (20)
276 <223> OTHER INFORMATION: Ala or Arg
278 <220> FEATURE:
279 <221> NAME/KEY: MOD_RES
280 <222> LOCATION: (21)
281 <223> OTHER INFORMATION: Ala or Leu
283 <220> FEATURE:
284 <221> NAME/KEY: MOD_RES
285 <222> LOCATION: (22)
286 <223> OTHER INFORMATION: Ala, Phe, Tyr or naphthylalanine
288 <220> FEATURE:
289 <221> NAME/KEY: MOD_RES
290 <222> LOCATION: (23)
291 <223> OTHER INFORMATION: Ile, Val, Leu, pentylglycine, tert-butylglycine or Met
293 <220> FEATURE:
294 <221> NAME/KEY: MOD_RES
295 <222> LOCATION: (24)
296 <223> OTHER INFORMATION: Ala, Glu or Asp
298 <220> FEATURE:
299 <221> NAME/KEY: MOD_RES
300 <222> LOCATION: (25)
301 <223> OTHER INFORMATION: Ala, Trp, Phe, Tyr or naphthylalanine
303 <220> FEATURE:
304 <221> NAME/KEY: MOD_RES
305 <222> LOCATION: (26)
306 <223> OTHER INFORMATION: Ala or Leu
308 <220> FEATURE:
309 <221> NAME/KEY: MOD_RES
310 <222> LOCATION: (27)
311 <223> OTHER INFORMATION: Ala or Lys
313 <220> FEATURE:
314 <221> NAME/KEY: MOD_RES
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/02/2002
PATENT APPLICATION: US/09/756,690A   TIME: 16:44:02

Input Set : **A:\249-124.app**
Output Set: **N:\CRF3\05022002\I756690A.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

```
Seq#:3; Xaa Pos. 1,2,3,6,7,8,9,10,14,22,23,24,25,31,36,37,38,39
Seq#:4; Xaa Pos. 1,2,3,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20,21,22,23,24
Seq#:4; Xaa Pos. 25,26,27,28,31,36,37,38
Seq#:5; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20,21,22,23
Seq#:5; Xaa Pos. 24,25,26,27,28,31,36,37,38
Seq#:15; Xaa Pos. 6
Seq#:20; Xaa Pos. 10
Seq#:21; Xaa Pos. 10
Seq#:22; Xaa Pos. 14
Seq#:23; Xaa Pos. 14
Seq#:24; Xaa Pos. 22
Seq#:27; Xaa Pos. 23
Seq#:28; Xaa Pos. 23
Seq#:31; Xaa Pos. 31,36,37,38
Seq#:32; Xaa Pos. 36,37,38
Seq#:33; Xaa Pos. 31,36,37,38
Seq#:34; Xaa Pos. 36,37,38
Seq#:35; Xaa Pos. 31,36,37,38
Seq#:36; Xaa Pos. 31,36,37,38
Seq#:37; Xaa Pos. 31,36,37,38
Seq#:38; Xaa Pos. 36,37,38
Seq#:39; Xaa Pos. 31,36,37,38
Seq#:81; Xaa Pos. 31,36,37,38
Seq#:82; Xaa Pos. 36,37,38
Seq#:83; Xaa Pos. 31
Seq#:84; Xaa Pos. 31,36,37
Seq#:85; Xaa Pos. 31,36,37
Seq#:86; Xaa Pos. 31,36
Seq#:89; Xaa Pos. 6
Seq#:93; Xaa Pos. 10
Seq#:94; Xaa Pos. 22
Seq#:95; Xaa Pos. 23
Seq#:99; Xaa Pos. 31,36,37
Seq#:115; Xaa Pos. 6
Seq#:116; Xaa Pos. 6
Seq#:127; Xaa Pos. 10
Seq#:128; Xaa Pos. 10
Seq#:137; Xaa Pos. 14
Seq#:138; Xaa Pos. 14
Seq#:151; Xaa Pos. 22
Seq#:152; Xaa Pos. 22
Seq#:155; Xaa Pos. 23
Seq#:156; Xaa Pos. 23
Seq#:181; Xaa Pos. 31,36,37,38
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/02/2002
PATENT APPLICATION: US/09/756,690A   TIME: 16:44:02

Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

Seq#:182; Xaa Pos. 36,37,38
Seq#:183; Xaa Pos. 31,36,37
Seq#:184; Xaa Pos. 31,36

VERIFICATION SUMMARY   DATE: 05/02/2002
PATENT APPLICATION: US/09/756,690A   TIME: 16:44:02

Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

```
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:170 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:16
L:176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:32
L:345 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:348 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:16
L:351 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:32
L:530 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:533 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:16
L:536 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:32
L:742 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:857 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:884 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
L:911 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
L:938 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
L:968 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:16
L:1039 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:16
L:1066 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:16
L:1152 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:16
L:1155 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:32
L:1192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:32
L:1231 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:16
L:1234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:32
L:1271 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:32
L:1310 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:16
L:1313 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:32
L:1352 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:16
L:1355 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:32
L:1394 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:16
L:1397 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:32
L:1434 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:32
L:1473 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:16
L:1476 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:32
L:2325 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:16
L:2328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:32
L:2365 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:32
L:2389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:16
L:2426 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:16
L:2429 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:32
L:2463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85 after pos.:16
L:2466 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85 after pos.:32
L:2495 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:16
L:2498 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:32
L:2560 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:0
L:2641 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93 after pos.:0
L:2668 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:94 after pos.:16
L:2692 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95 after pos.:16
L:2785 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99 after pos.:16
```

VERIFICATION SUMMARY   DATE: 05/02/2002
PATENT APPLICATION: **US/09/756,690A**   TIME: 16:44:02

Input Set : **A:\249-124.app**
Output Set: **N:\CRF3\05022002\I756690A.raw**

```
L:2788 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99 after pos.:32
L:3093 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:115 after pos.:0
L:3117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:116 after pos.:0
```